



Latest in Computer-Wear

As public safety agencies moved into the Information Age, first responders gained access to detailed tactical response information via personal computers—access that was limited to their desks.

In the field, first responders continued to rely on information relayed to them via telephone or radio. As technology developed, computer access was extended beyond the desk or office as laptops and small computers became standard issue for patrol cars and other response vehicles. Unfortunately, emergency personnel often must leave their vehicles—and their information—behind as they move out on foot.

In Charleston, South Carolina, a group of first responders is testing the usefulness of small wearable computers during critical response incidents. The results from this demonstration project may eventually lead to first responders commonly having access to building schematics, aerial photographs, digitized maps, and other information—no matter where their feet take them.

The National Institute of Justice has awarded a grant to the National Law Enforcement and Corrections Technology Center (NLECTC)–Southeast’s technology partner, the South Carolina Research Authority, which in turn funded the Xybernaut Corporation and the Tactical Survey Group (TSG), Inc., to evaluate the Critical Incident Response Toolset (CIRT) as a national model for first-responder technology. This test product combines a Xybernaut wearable computer with TSG site-specific tactical survey software. The three sponsoring agencies chose Charleston because it is the second busiest container shipping port on the East Coast, it is the site of several military installations, and, perhaps most important, the city’s public safety agencies have strong relationships with one another.

Twelve Charleston police, fire, and public safety agencies provided two participants each to test computer units (a tactical end user and an information technology specialist). The participating agencies include the Aviation Authority Police; the Charleston City fire and police departments; the Charleston County emergency medical services, emergency preparedness department, fire department,

and sheriff’s office; the Mt. Pleasant fire and police departments; the North Charleston fire and police departments; and the State Port Authority Police Department.

According to Coleman Knight, law enforcement specialist at NLECTC–Southeast, each participating agency received two wearable computer units to keep, maintain, and use in future phases of the demonstration project. The project’s objective is to test the units in the field and produce a spring 2004 report that will detail lessons learned and potential uses for the wearable computers.

Knight explains that a working group consisting of representatives from the participating public safety agencies selected three demonstration sites for computer tests and agreed not to publicize the specific locations. “We will run a functionality test at one location this summer, probably a school, which will include an actual functional response and a tabletop exercise using the tactical surveys available at that time,” he says. “Also, the Charleston County Emergency Preparedness Division holds a multijurisdictional disaster response called a Med-X each fall. We may use one of the Med-X sites and integrate the wearable computer and the site surveys into the exercise.”

The portable unit to be tested at those sites can be worn on a belt around the waist, but Xybernaut is researching other, more practical options for law enforcement officers who already wear other equipment on their belts, Knight says.

The unit consists of a brick-sized processor that runs at 500 MHz and supports a 10-gigabyte hard drive, and a touch screen that works well in indirect sunlight. The unit will run on either Windows or Linux operating systems and appears to work well in less-than-ideal environments such as areas that are prone to sand, dirt, or dust.

During the demonstration project, each unit will work independently. According to Knight, in future applications, wireless communications could link the units together. The wearable computers also can connect to a network via a docking station and perform operations similar to those performed by comparably configured laptops.

At the close of the testing phase, NLECTC–Southeast plans to issue a lessons-learned report for distribution to public safety agencies.

For more information about the wearable computer demonstration project, contact Coleman Knight at 800-292-4385 or knight@nlectc-se.org.

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